Paper No. 32

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHRISTINE RONDEAU

Appeal No. 2003-1308
Application No. 09/287,176

HEARD: November 5, 2003

Before KIMLIN, WARREN and OWENS, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-42. A copy of illustrative claim 1 is appended to this decision.

The examiner relies upon the following references as evidence of obviousness:

Cotteret et a. (Cotteret)	5,735,908	Apr. 07, 1998
Kao Corporation (German Patent)	DE 29512302	Jan. 16, 1997
Möckli (PCT International Application)	WO 95/01772	Jan. 19, 1995

Appellant's claimed invention is directed to a composition for dying keratin fibers comprising at least one of the recited cationic direct dyes and at least one of the claimed cationic or amphoteric substantive polymers. According to appellant's specification, a first type of dyeing in the hair sector is semi-permanent or temporary dyeing, also known as direct dyeing. A second type is permanent or oxidation dyeing with "oxidation" dyes comprising oxidation dye precursors and couplers. At the time of filing the present application, it was a known practice to vary the shades obtained with oxidation dyes by adding direct dyes thereto. Known cationic direct dyes have the disadvantage of leading to insufficient colorations, both regarding the homogeneity of the color distributed among the fiber and the staying power. Appellant's specification relates that:

> Now, after considerable research conducted in this area, the Inventor has discovered that it is possible to obtain novel compositions for dyeing keratin fibers capable of giving colorations that are less selective

> and that show good resistance to the various attacking factors to the hair, by combining at least one specific cationic or amphoteric substantive polymer with at least one cationic direct dye known in the art and of formulae respectively defined below (page 2 of specification, penultimate paragraph).

Appealed claims 1-42 stand rejected under 35 U.S.C. § 103 as being unpatentable over Cotteret in view of Mockli. Claims 1-23, 32-36 and 41-42 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kao in view of Mockli.[1]

Appellant submits at page 4 of the principal brief that, with respect to the rejection over Cotteret in view of Mockli, claims 1-42 stand or fall together, and with respect to the rejection over Kao in view of Mockli, claims 1-23, 32-36 and 41-42 stand or fall together. Consequently, all the appealed claims stand or fall together with claim 1, and, accordingly, we will limit our review to the examiner's rejections of claim 1.

We have thoroughly reviewed appellant's arguments for patentability. We are in complete agreement with the examiner, however, that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain

[1] The examiner's obviousness-type double patenting rejection of the appealed claims has been withdrawn in view of appellant's submission of a terminal disclaimer.

the examiner's rejections for essentially those reasons expressed in the Answer, and we add the following primarily for emphasis.

We consider first the examiner's rejection of all the appealed claims over Cotteret in view of Mockli. There is no dispute that Cotteret, like appellant, teaches a composition for dyeing keratin fibers comprising cationic or amphoteric substantive polymers within the scope of the appealed claims and direct dyes. Cotteret does not teach the specific cationic direct dyes embraced by the appealed claims. However, there is also no dispute that Mockli teaches compositions for dyeing keratin fibers comprising the presently claimed cationic direct dyes, and teaches that such cationic direct dyes

> can be used to achieve in a very simple way and under gentle conditions very deep dyeings having excellent light, shampooing and crock fastness properties. Owing to their extremely clean shades, they also extend the range of possible mixed shades considerably, especially in the direction of the increasingly important brilliant fashion colours.

(Paragraph bridging pages 1 and 2). Accordingly, based on the collective teachings of Cotteret and Mockli, we find no error in the examiner's reasoning that it would have been prima facie obvious for one of ordinary skill in the art to select the cationic direct dyes of Mockli for use in the dyeing compositions of Cotteret for the advantages described in Mockli. Since

Cotteret teaches that direct dyes, in general, may be added to the oxidation dye compositions comprising the presently claimed cationic or amphoteric substantive polymers, and Mockli also teaches that appellant's cationic direct dyes may be formulated with cationic conditioning polymers, we are satisfied that one of ordinary skill in the art would have reasonably expected that the cationic direct dyes of Mockli would be compatible in the dye compositions of Cotteret.

Appellant contends that "*Cotteret* provides motivation only to use a substantive amphoteric or cationic polymer with an oxidation dye, not with a direct dye" (page 11 of principal brief, first paragraph). However, since Cotteret expressly teaches the addition of direct dyes to the dye composition, we agree with the examiner that appellant's argument is without merit. Mockli provides the motivation for one of ordinary skill in the art following the teachings of Cotteret to select the specific direct dyes used by appellant.

We are also not persuaded by appellant's argument that "*Mockli* does not teach or suggest using its direct dyes in an oxidative composition" (id., second paragraph), since Mockli discusses certain reservations and toxicological risks associated with using oxidation compositions. It is Cotteret, not Mockli,

who provides the teaching of using direct dyes in composition with oxidation compositions and, furthermore, Mockli provides no teaching that the cationic direct dyes cannot be used in an oxidation composition. Hence, we do not subscribe to appellant's argument that Mockli presents a "teaching away" from oxidation dyeing but, rather, Mockli teaches that effective dyeing can be achieved without the known disadvantages of oxidation dyes by using the disclosed direct dyes. We are satisfied that one of ordinary skill the art would have found it obvious to use the direct dyes of Mockli in composition with oxidation dyes with the expectation of experiencing the disadvantages attendant with the use of oxidation dyes. We note that appellant has presented no argument, let alone objective evidence, which demonstrates that the claimed compositions, which may include oxidation dyes, do not exhibit the toxicological risks discussed by Mockli.

We now turn to the rejection over Kao in view Mockli. Appellant does not dispute the examiner's factual determination that Kao, like appellant, discloses a composition for dyeing keratin fibers comprising direct dyes and substantive conditioning polymers claimed by appellant. Kao does not disclose appellant's cationic direct dyes. However, for the reasons discussed above, we concur with the examiner that it

would have been obvious for one of ordinary skill in the art to select the cationic direct dyes of Mockli for use in the dyeing composition of Kao.

It is appellant's argument that Kao "suggests improving stability of dyeing compositions using a hydroxy-C_2-C_4-alkyl guar gum together with a dye compatible together with that guar gum" (page 6 of principal brief, first paragraph), and that Kao lists 42 direct dyes that meet this requirement, but "none of the dyes in this list falls within the scope of the presently claimed cationic direct dyes (page 6 of principal brief, second paragraph). However, as explained by the examiner and acknowledged by appellant, Kao provides a general teaching that all direct-acting hair dyes may be used and, significantly, Kao further teaches that "the cationic (basic) dyes are particularly preferred since their stability and dye uptake properties are especially enhanced by the addition of the guar gum derivative according to the invention" (page 2 of translation, fourth paragraph, emphasis added). Hence, although the list of 19 cationic dyes provided by Kao does not include the specifically claimed dyes, we agree with the examiner that Kao's character-ization of cationic dyes, in general, as particularly preferred would have clearly suggested the particular cationic direct dyes

disclosed by Mockli. We find that one of ordinary skill in the art would have found it obvious to employ the direct dyes of Mockli in the composition of Kao for the purpose of achieving the advantages described by Mockli and, based on the Kao disclosure that cationic dyes are particularly preferred because their stability and dye uptake are enhanced by the addition of guar gum, one of ordinary skill in the art would have reasonably expected that the direct dyes of Mockli would be compatible with the guar gum of Kao's dyeing composition. Appellant has advanced neither argument nor evidence demonstrating that one of ordinary skill in the art would have had any expectation that the direct dyes of Mockli would be incompatible with the guar gum of Kao. While appellant contends that Kao "does not fairly suggest that all dyes will work with its guar gums" (page 7 of principal brief, last paragraph), Kao does teach that cationic dyes are particularly preferred.

As a final point, we note that appellant bases no argument upon objective evidence of nonobviousness which would serve to rebut the inference of obviousness established by the applied prior art.

In conclusion, based on the foregoing and the reasons well-stated by the examiner, the examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

EDWARD C. KIMLIN Administrative Patent Judge	)	
CHARLES F. WARREN Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
TERRY J. OWENS Administrative Patent Judge	)	

ECK:clm

Finnegan, Henderson, Farabow,
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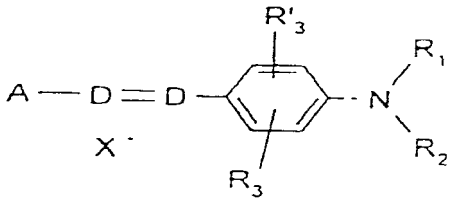
1300 I St., N.W.
Washington, DC 20005-3315

APPENDIX

1. A composition for dyeing keratin fibers, said composition comprising, in a medium suitable for dyeing,

(i) at least one cationic direct dye chosen from cationic direct dyes of formula (I), (II), (III) and (III') below:



(I)

wherein, in said formula (I):

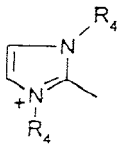
D is chosen from a nitrogen atom and a -CH group,

R_1 and R_2 are identical or different and are chosen from a hydrogen atom, a 4'aminophenyl radical and a C_1-C_4 alkyl radical which is unsubstituted or substituted with a radical chosen from -CN, -OH and $-NH_2$, or R_1 and R_2 form, with a carbon atom of the benzene ring, a heterocycle containing at least one heteroatom chosen from oxygen and nitrogen and which is unsubstituted or substituted with at least one C_1-C_4 alkyl radical;

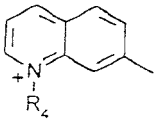
R_3 and R'_3 are identical or different and are chosen from a hydrogen atom, a halogen atom chosen from chlorine, bromine, iodine and fluorine, a cyano group, a C_1-C_4 alkyl radical, a C_1-C_4 alkoxy radical, and an acetyloxy radical;

X^- represents an anion;

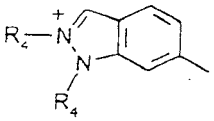
A is a group chosen from structures A1 to A19 below:



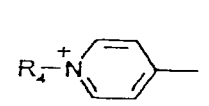
A_1 ;



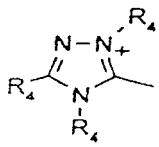
A_2 ;



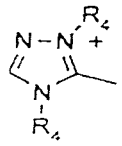
A_3



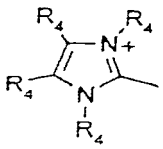
A_4 ;



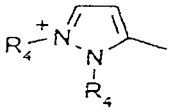
A_5 ;



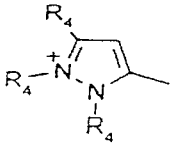
A_6 ;



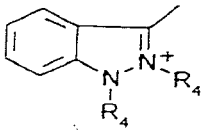
A_7 ;



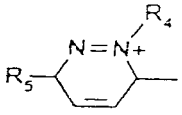
A_8 ;



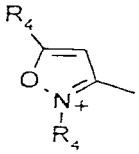
A_9 ;



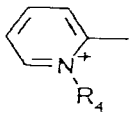
A_{10} ;



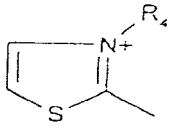
A_{11} ;



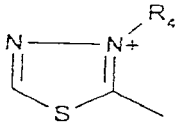
A_{12}



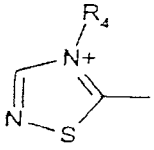
A_{13} ;



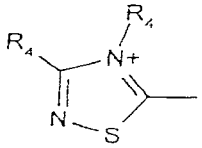
A_{14} ;



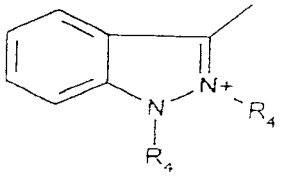
A_{15}



A_{16} ;

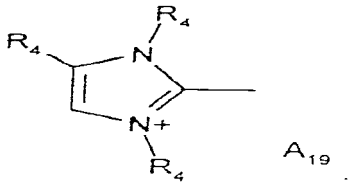


A_{17}



A_{18}

and



wherein

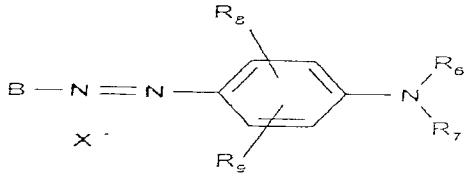
R_4 represents a C_1-C_4 alkyl radical which is unsubstituted or substituted with a hydroxyl radical; and

R_5 represents a C_1-C_4 alkoxy radical;

with the provisos that

when D is -CH, A is chosen from A_4 and A_{13}, and R_3 is other than an alkoxy radical, then R_1 and R_2 do not simultaneously represent a hydrogen atom; and

when D represents N, A is chosen from A_1-A_3, A_5-A_{12} and A_{14}-A_{19};



(II)

wherein, in said formula (II):

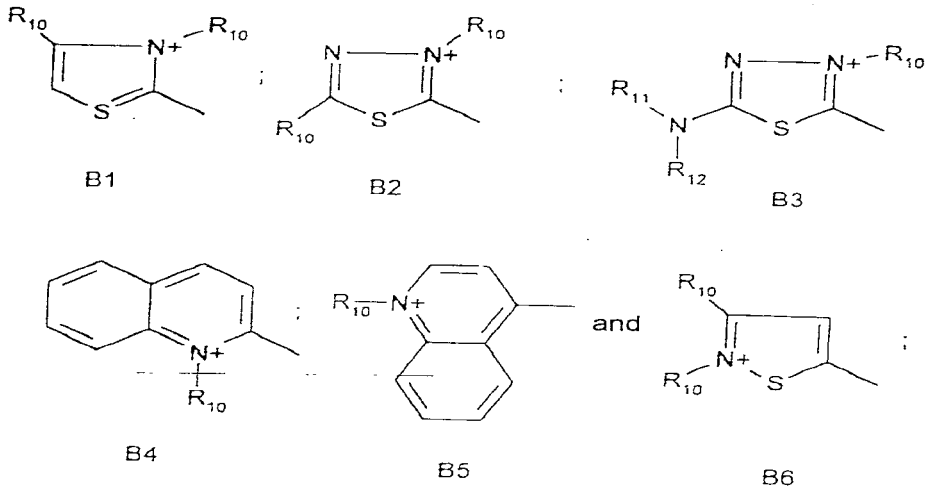
R_6 is chosen from a hydrogen atom and a C_1-C_4 alkyl radical;

R_7 is chosen from a hydrogen atom, an alkyl radical which is unsubstituted or substituted with a -CN radical or with an amino group, and a 4'-aminophenyl radical, or R_7 forms, with R_6, a heterocycle containing at least one heteroatom chosen from oxygen and nitrogen and which is unsubstituted or substituted with a C_1-C_4 alkyl radical;

R_8 and R_9 are identical or different and are chosen from a hydrogen atom, a halogen atom, a C_1-C_4 alkyl radical, a C_1-C_4 alkoxy radical, and a -CN radical;

X^- is an anion;

B is a group chosen from structures B1 to B6 below:



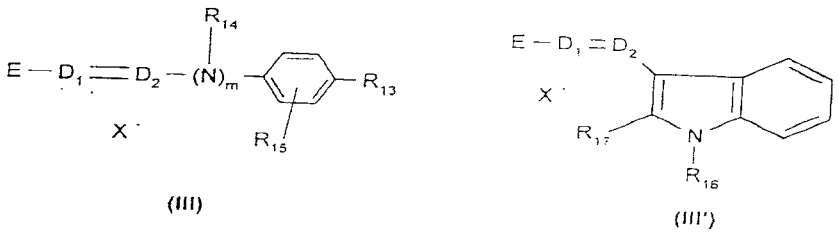
B1 B2 B3

B4 B5 and B6

wherein

R is a C_1-C_4 alkyl radical;

R_{11} and R_{12}, which are identical or different, are chosen from a hydrogen atom and a C_1-C_4 alkyl radical;



(III) (III')

wherein, in said formulae (III) and (III'):

R_{13} is chosen from a hydrogen atom, a C_1-C_4 alkoxy radical, a halogen atom, and an amino radical;

R_{14} is chosen from a hydrogen atom and a C_1-C_4 alkyl radical, or R_{14} forms, with a carbon atom of the benzene ring, a heterocycle which is optionally oxygenated and/or substituted with at least one C_1-C_4 alkyl group;

R_{15} is chosen from a hydrogen atom and a halogen atom;

R_{16} and R_{17}, which are identical or different, are chosen from a hydrogen atom and a C_1-C_4 alkyl radical;

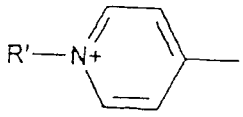
D_1 and D_2, which are identical or different, are chosen from a nitrogen atom and a -CH group;

m = 0 or 1;

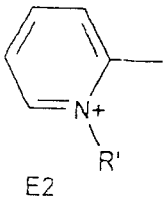
with the proviso that when R_{13} is an unsubstituted amino group, then D_1 and D_2 simultaneously are a -CH group and m = 0;

X^- is an anion; and

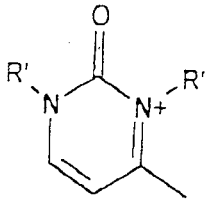
E is a group chosen from structures E1 to E8 below:



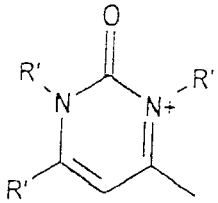
E1 ;



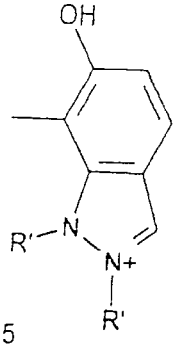
E2 ;



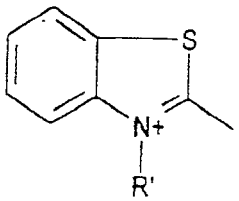
E3 ;



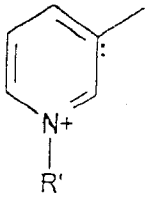
E4 ;



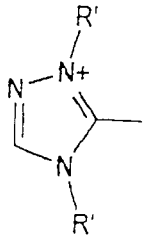
E5 ;



E6 ;



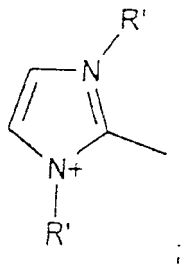
E7 and



E8 ;

wherein R' is a C_1-C_4 alkyl radical;

with the proviso that when m = 0 and D_1 is a nitrogen atom, then E can also be a group of structure E9 below:

E9 

wherein R' is a C_1-C_4 alkyl radical;

with the further proviso that in said formula (III) when D_1 and D_2 are simultaneously a nitrogen atom, m = 0, R_{13} is an amino radical and R_{15} is a hydrogen atom, then E is chosen from E_3 to E_5, E_7 and E_8; and

(ii) at least one cationic or amphoteric substantive polymer chosen from:

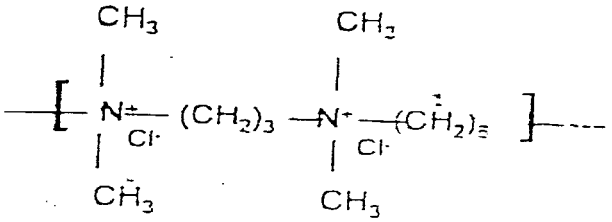
(a) cellulosic cationic derivatives with the exception of polymeric quaternary ammonium salts of hydroxyethyl cellulose reacted with a trimethyl ammonium substituted epoxide;

(b) copolymers of dimethyldiallylammonium halide and of (meth)acrylic acid;

(c) methacryloyloxyethyltrimethylammonium halide homopolymers and copolymers;

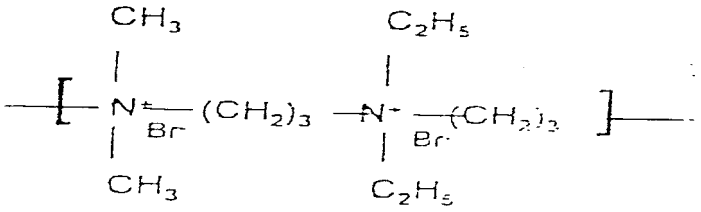
(d) polyquaternary ammonium polymers chosen from:

- polymers of repeating units having formula (IV) below:



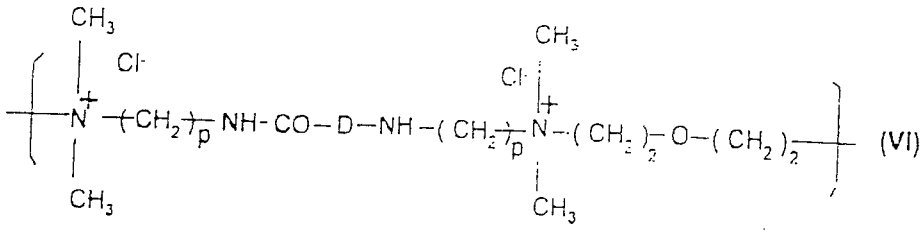
(IV)

- polymers of repeating units having formula (V) below:



(V)

- and polymers of repeating units having formula (VI) below:



(VI)

wherein p represents an integer ranging from 1 to 6 approximately, D is absent or is a group $-(CH_2)_r-CO-$ wherein r represents a number equal to 4 or 7; and

(e) vinylpyrrolidone copolymers containing cationic units.